AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A cell-filled device ~~of a modified cross-section hollow fiber membrane type~~, comprising:

hollow fiber membranes ~~whose hollow portions are filled with cells, characterized in that: the hollow fiber membranes have modified cross sections~~ having inner walls which define hollow portions and modified cross-sections which are shaped as deformed perfect circles; and

a cell aggregate provide in each of the hollow portions ~~has cells formed into~~, each cell aggregate having cells accumulated to form two or more layers ~~in arbitrary directions, provided that~~ in any radial direction, wherein,

a distance from ~~an arbitrary~~ any point of the cell aggregate to the ~~nearest~~ inner wall ~~of the hollow fiber membrane is less than 75 μm~~ cannot be 75 μm or more.

2. (currently amended) [[A]] The cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to claim 1, wherein the distance to the nearest inner wall of the hollow fiber membrane is 50 μm or less.

3. (currently amended) [[A]] The cell-filled device ~~of a modified cross section hollow fiber membrane type~~ according to claim 1, ~~characterized in that a cross section of~~ wherein the modified cross-section hollow fiber membrane is in a flat form such that the form has a contact angle of 70 degrees or less.

4. (currently amended) [[A]] The cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to claim 1, ~~characterized in that~~ wherein a pore size of the hollow fiber membrane is 0.001 to 5 μm.

5. (currently amended) [[A]] The cell-filled device ~~of a modified cross section hollow fiber membrane type~~ according to claim 4, wherein the pore size is 0.05 to 1 μm.

6. (currently amended) [[A]] The cell-filled device ~~of a modified cross section hollow fiber membrane type~~ according to claim 1, ~~characterized in that~~ wherein the hollow fiber membrane is made of a synthetic polymer having a contact angle of 70 degrees or less.

7. (currently amended) [[A]] The cell-filled device ~~of a modified cross section hollow fiber membrane type~~ according to claim 6, wherein the synthetic polymer comprises a thermoplastic resin.

8. (currently amended) [[A]] The cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to claim 7, wherein the thermoplastic resin comprises a polyethylene-based resin.

9. (currently amended) [[A]] The cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to claim 1, ~~characterized in that~~ wherein at least an inner surface of the hollow fiber membrane contains a hydrophilic polymer.

10. (currently amended) [[A]] The cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to claim 1, ~~characterized in that~~ wherein the cells comprise cells derived from an animal tissue.

11. (currently amended) [[A]] The cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to claim 10, ~~characterized in that~~ wherein the cells derived from an animal tissue comprise at least one kind of cell selected from the group consisting of cells derived from a liver, cells derived from a spleen, stem and precursor cells thereof, and genetic recombinant cells.

12. (currently amended) [[A]] The cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to

claim 11, ~~characterized in that~~ wherein the cells derived from an animal tissue comprise hepatic cells.

13. (currently amended) [[A]] The cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to claim 10, wherein the cells derived from an animal tissue comprise cells derived from a human organ.

14. (currently amended) A cell-filled device, comprising hollow fiber membranes and cells, provided as the cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ for implantation according to claim 1, wherein each of the hollow portions contains a cell aggregate and both ends of each hollow fiber membrane are sealed.

15-16. (cancelled)

17. (currently amended) A hybrid artificial organ, comprising:

at least one cell-filled device ~~of a modified cross-section hollow fiber membrane type~~ according to claim 1~~, being housed in~~; and

a container having an inlet and an outlet for a liquid to be treated, said container housing said at least one cell-filled device,

~~characterized in that an inside of a~~ wherein the hollow portions of the hollow fiber membranes of the cell-filled device ~~of a modified cross section hollow fiber membrane type is separated from an external of the hollow forming~~ provide a communication path [[of]] from the inlet to the outlet for the liquid to be treated.

18-29. (canceled)

30. (new) The cell-filled device according to claim 1, wherein the modified cross section is a shape selected from the group consisting of a triangle, a rectangle, a diamond, a dumbbell, a letter “C”, and a five-pointed star.

31. (new) The cell-filled device according to claim 30, wherein the triangle shape has concave sides.

32. (new) The cell-filled device according to claim 30, wherein the rectangle shape has concave sides.